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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/022,645	12/17/2001	Mark Pool	A3138/T44100	1784

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APPLIED MATERIALS, INC.
2881 SCOTT BLVD. M/S 2061
SANTA CLARA, CA 95050

EXAMINER

KEENAN, JAMES W

ART UNIT	PAPER NUMBER
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3652

DATE MAILED: 12/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/022,645

Applicant(s)

POOL, MARK

Examiner

James Keenan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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1. Applicant's election without traverse of Group I in Paper No. 7 is acknowledged.

Applicant's cancellation of non-elected claims 9-15 is acknowledged.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 360 (page 7, line 27). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 5-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In each of these claims, "the tool" lacks antecedent basis.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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6. Claims 1, 2, 4, and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Wong et al (WO 91/04213).

Wong et al show a semiconductor wafer processing system comprising processing chambers 28-30, central transfer chamber 24, first robot 31, and a load lock having a main chamber 14 with a second robot 18 in communication with the first robot through valves 19, 23 (although the claim recites one valve, it does not preclude more than one), and first and second load lock antechambers 10, 15, each of which are configured to receive a wafer batch and are in communication with the second robot through respective valves 13, 17, wherein the antechambers are selectively evacuable from the main chamber and each other (see page 6, line 19 to page 7, line 7). Although not explicitly disclosed, a vacuum pump is considered inherent. Note also that although Wong et al do not utilize the same terminology as applicant in reciting the load lock as comprising a main chamber and first and second antechambers, the elements referred to above are mechanically identical to those claimed by applicant.

Re claim 4, Wong et al show pre- and post-processing apparatus 36, which is considered to be "in communication with" at least one of the antechambers, as broadly claimed (see page 8, line 17 to page 9, line 14).

7. Claims 1, 2, 4, and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Kato et al (US 5,913,978).

See in figures 1-2 processing chambers 4, transfer chamber 6, first robot 22, load lock main chamber 10, second robot 16, first slit valve(s) G7-G8, first and second load

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lock antechambers 8A, 8B, second and third valves G5, G6, and a vacuum pump (not shown but disclosed in column 5, line 60). Again, although the terminology may be different, the noted elements structurally correspond to the claimed subject matter.

8. Claims 1 and 3-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Heyder et al (US 6,034,000).

Note in figure 5 processing chambers 240, central transfer chamber 216, first robot 214, and load lock comprising main chamber 260 with second robot 266a or 266b and first slit valve 270, first load lock antechamber 262 with second slit valve 290, and second load lock antechamber 280a or 280b with third slit valve 300a or 300b, wherein the first and second antechambers are selectively evacuable from each other and the main chamber through an inherent vacuum pump.

Re claim 4, note column 5, lines 48-55.

Re claims 5-7, note external storage cassettes 296.

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 3 and 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong et al.

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Wong et al do not show the antechambers to be oriented orthogonally with respect to each other. However, it would have been obvious for one of ordinary skill in the art at the time of the invention to have modified the apparatus of Wong et al by orienting the antechambers in this manner, as this would simply be an alternate equivalent design expediency based on the operating parameters of the system, the inclusion of which would neither require undue experimentation nor produce unexpected results.

Re claims 5-7, Wong et al disclose that the antechambers may be adapted for a cassette of wafers, single wafers, SMIF compartments, or other process substrates, but do not disclose a buffering table outside the apparatus from which the wafers are supplied. Nevertheless, the examiner takes Official notice that the inclusion of a buffering table to supply wafers to the system would have been obvious to one of ordinary skill in the art, as this is a well known expediency in the art.


11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Keenan whose telephone number is 703-308-2559.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen Lillis can be reached on 703-308-3248. The fax phone number for the organization where this application or proceeding is assigned is 703-305-7687.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.


James Keenan
Primary Examiner
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jwk

11/26/03